



Missouri Weekly Influenza Surveillance Report 2014-2015 Influenza Season¹

Week 5: February 1 – February 7, 2015

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri has decreased to Regional.²
- A season-to-date total of 41,850 laboratory-positive³ influenza cases have been reported in Missouri. Influenza A continued to be the predominant influenza type accounting for 80% of reported cases during Week 5. All three of the laboratory-confirmed influenza cases reported by the Missouri State Public Health Laboratory (MSPHL) during Week 5 were influenza A (H3).
- CDC has antigenically characterized 11 influenza isolates so far this influenza season from Missouri: five A (H3N2) A/TEXAS/50/2012-like, four A H3N2 viruses antigenically similar to the A/Switzerland/9715293/2013, one B/MASSACHUSETTS/02/2012-like, and one B/BRISBANE/60/2008-like. Influenza A/TEXAS/50/2012-like and B/MASSACHUSETTS/02/2012-like are included in the 2014-2015 influenza vaccine for the Northern Hemisphere. B/Brisbane/60/2008-like is included in the 2014-2015 Northern Hemisphere quadrivalent influenza vaccine. Influenza A/Switzerland/9715293/2013 is related to, but antigenically and genetically distinguishable, from the A/Texas/50/2012 vaccine virus and accounts for 68.7% of viruses from U.S. laboratories from October 1, 2014 – January 31, 2015. <http://www.cdc.gov/flu/weekly/>
- Influenza-like illness activity is above baseline for both the Missouri Outpatient ILI Surveillance Network (ILINet) and hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI was 3.69% and 2.4% through ILINet and ESSENCE respectively⁴.
- The highest rate of laboratory-positive influenza cases were among children aged 0-4 years (35 cases per 100,000 population). One influenza-associated pediatric death has been reported in Missouri to date, this influenza season. Deaths involving Pneumonia and Influenza (P&I) reported to the Bureau of Vital Records decreased to 111 deaths during Week 4, resulting in a season-to-date total of 1,579 P&I associated deaths in Missouri⁵.
- No outbreaks of influenza or ILI were reported during Week 5 in Missouri. No ILI-associated school closures were reported during Week 5.
- National influenza activity and surveillance information is prepared by the Centers for Disease Control and Prevention (CDC). The information including a weekly report (FLUVIEW) is available online at <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>.

¹The 2014-2015 influenza season in Missouri began CDC Week 40 (Week ending October 4, 2014) through CDC Week 20 (week ending May 23, 2015).

²Regional is defined as: Increased ILI in at least 2 regions but less than half of the regions, AND recent (within the past 3 weeks) lab confirmed influenza in the affected regions. OR Institutional outbreaks (ILI or lab confirmed) in at least 2 regions, but fewer than half of the regions, AND recent lab confirmed influenza in the affected regions.

³Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

⁴Influenza-like Illness (ILI) is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza.

⁵The P&I data are available one week later. The P&I data for the CDC Week provided is the most current data available.

Surveillance Data:

Interactive Maps

The county specific influenza data are provided through interactive maps available at <https://emgis.oa.mo.gov/DPS/BriefingMaps/?bookId=891e5ee61509408294e5ca7855434d84>. Click on the county to view the influenza data specific to that county.

- Reported Laboratory -positive Influenza Cases by Influenza Type by County, CDC Week 5
- Reported Laboratory -positive Influenza Cases by Influenza Type by County, Season-to-Date
- Percentage of Laboratory-positive Influenza Cases Reported to be Influenza Type A

Data Tables and Graphs

Table 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 3 - 5 (January 18 – February 7, 2015)

Influenza Type	Week 3	Week 4	Week 5	2014-2015* Season-to-Date
Influenza A	1,878	1,218	581	38,622
Influenza B	182	232	128	2,168
Influenza Unknown Or Untyped	69	70	15	1,060
Total	2,129	1,520	724	41,850

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

Table 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 5 (February 1 – February 7, 2015)

Age Group	Week 5 Cases	Week 5 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
00-04	133	35	7,965	2,100
05-14	193	25	12,162	1,548
15-64	274	7	15,529	391
65+	124	14	6,194	701
Total	724	12	41,850	695

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Table 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 5 (February 1 – February 7, 2015)

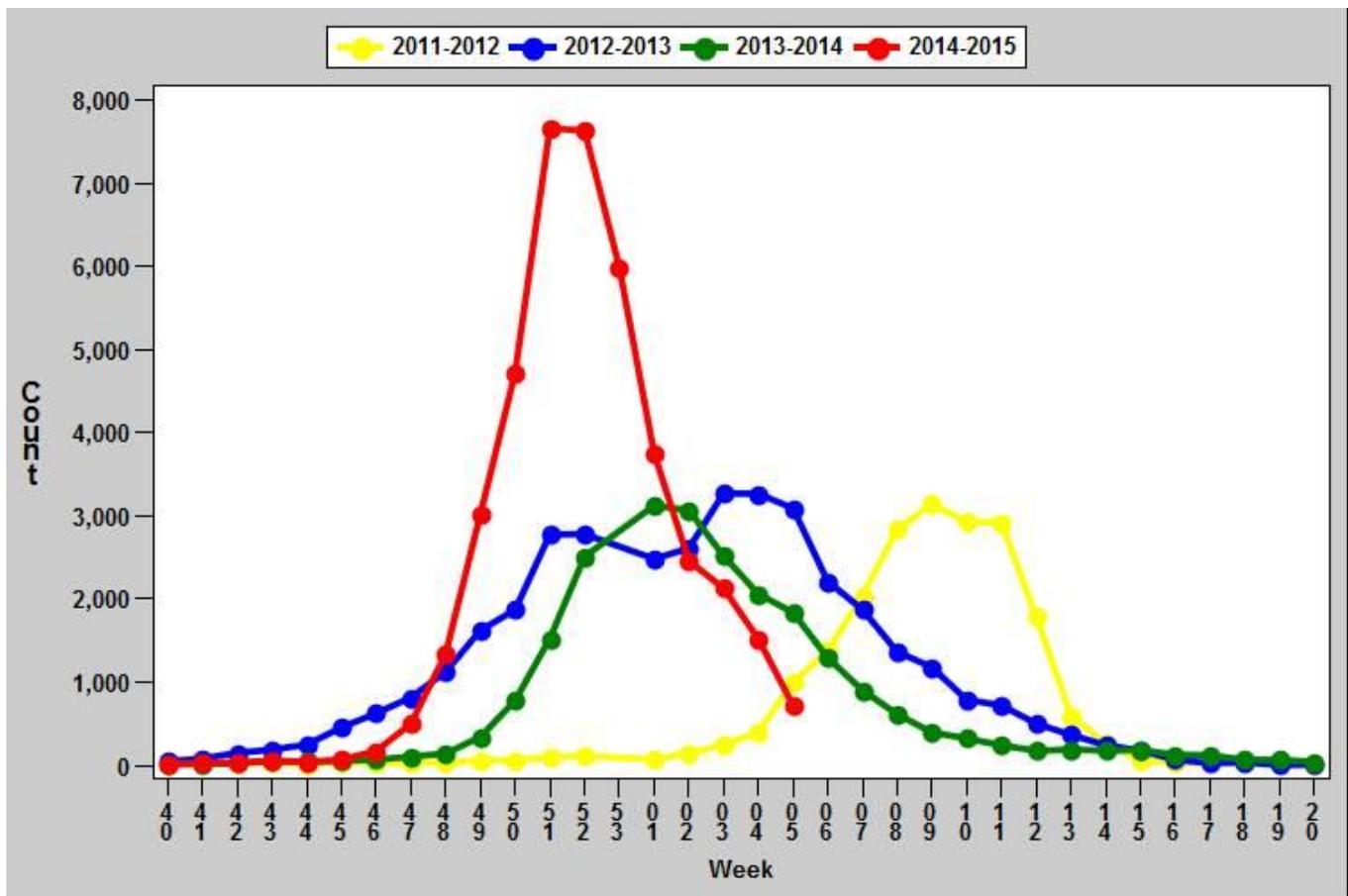
District	Week 5 Cases	Week 5 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
CE	40	6	5,626	839
EA	91	4	11,672	521
NW	268	17	12,203	773
SE	151	32	4,990	1,051
SW	174	16	7,359	696
Total	724	12	41,850	695

[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡] Incidence Rate per 100,000 population

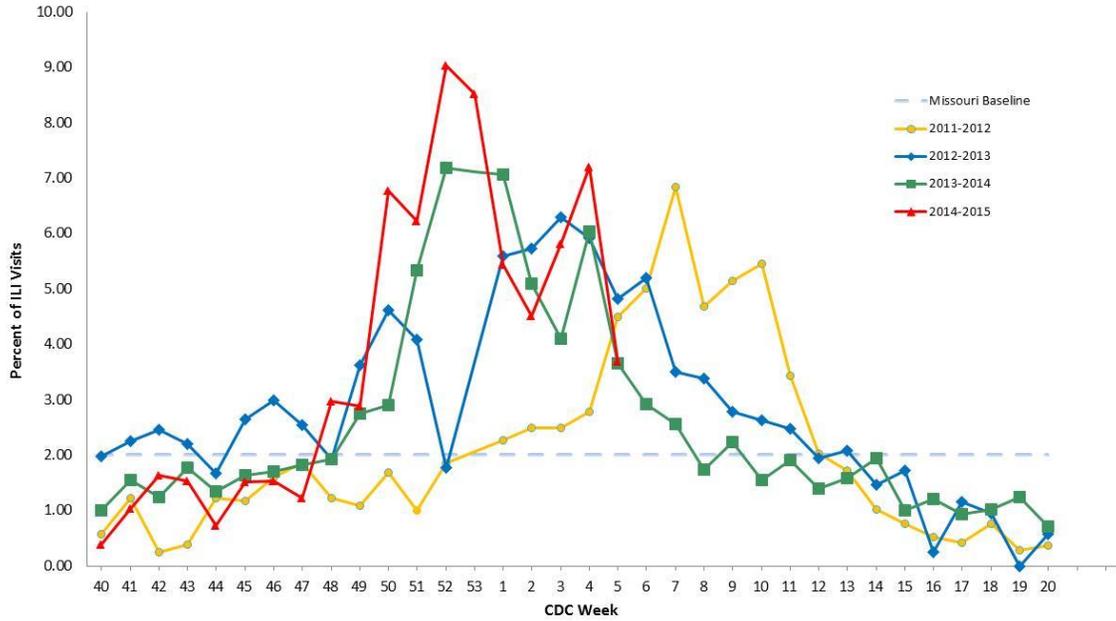
Graph 1. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2011-2015*



[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

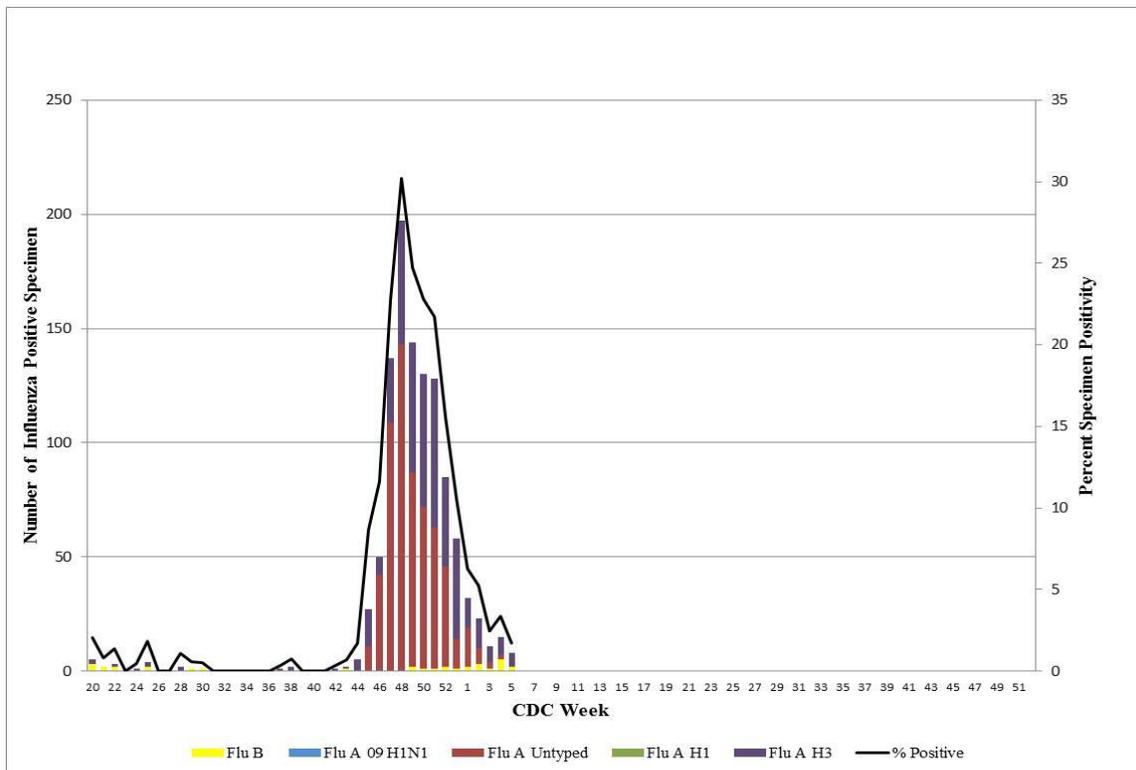
*2014-2015 Season-to-Date through the week ending February 7, 2015 (Week 5). Data Source: Missouri Health Information Surveillance System (WebSurv).

Graph 2. Percentage of Visits for Influenza-like-Illness (ILI), Missouri Outpatient ILI Surveillance Network (ILINet) 2011-2015*



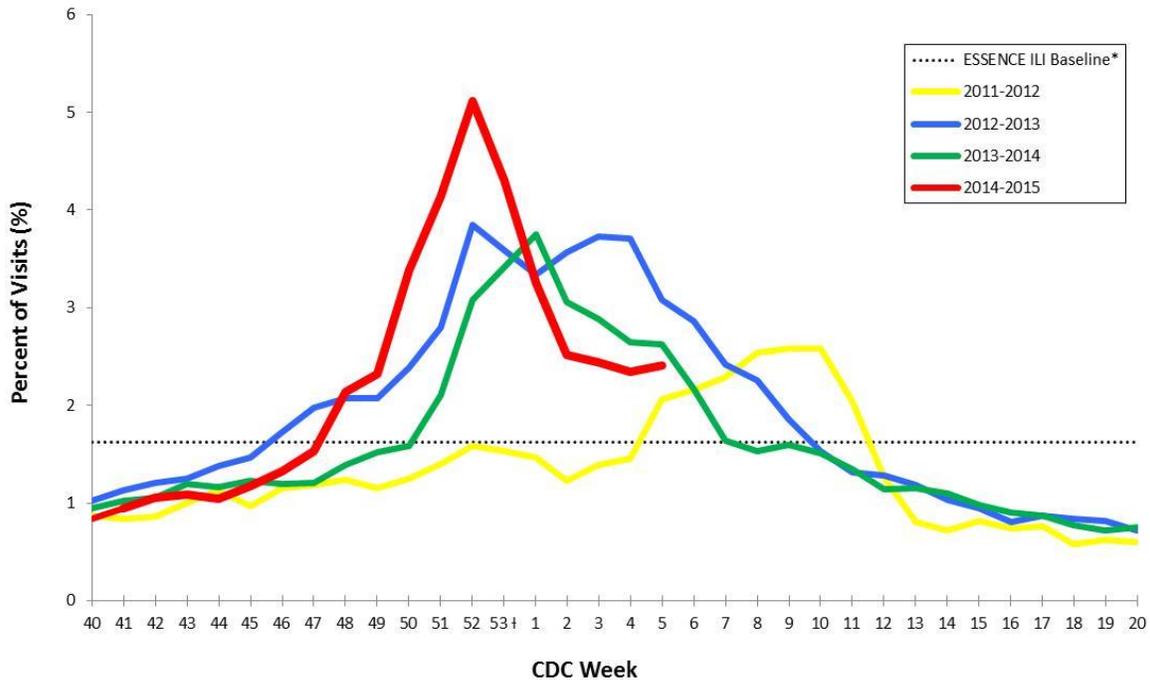
*2014-2015 Season-to-Date through the week ending February 7, 2015 (Week 5)

Graph 3. St. Louis Children’s Hospital Season-to-Date PCR (+) and Rapid Influenza Tests



*Data Source: St. Louis Children’s Hospitals
 *This data is based on testing in all age groups in St Louis metro and SE Missouri
 *Influenza Season begins Week Ending October 4, 2014 (CDC Week 40)

Graph 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI), ESSENCE Participating Hospitals in Missouri, 2011-2015[†]



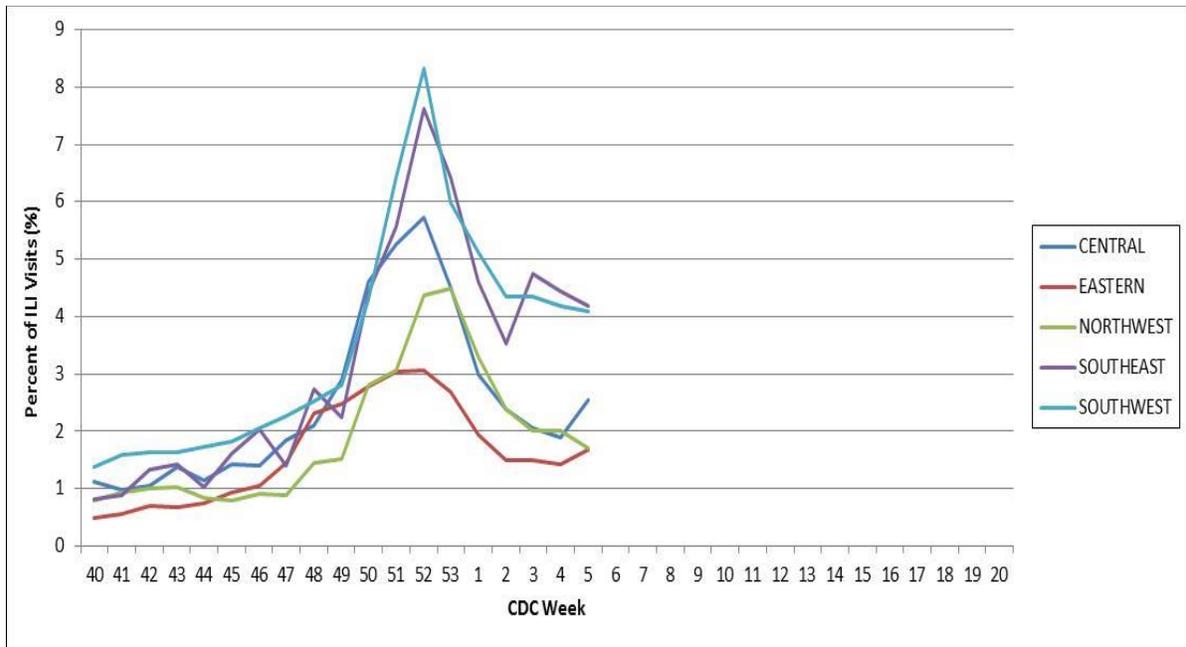
[†]Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. Includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).
 *ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three years (2011-13) when percentage of ILI visits were less than 2% of total visits, plus two standard deviations.

Table 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI) from ESSENCE Participating Hospitals by Age Group, Missouri, CDC Week 5 (February 1 – February 7, 2015)

District	Age 0-4	Age 5-17	Age 18-44	Age 45-64	Age 65+	Total Percentage
Northwest	2.8%	2.4%	1.7%	1.4%	0.6%	1.7%
Central	7.5%	3.1%	1.9%	2.0%	1.8%	2.6%
Eastern	3.4%	2.5%	1.5%	1.2%	1.0%	1.7%
Southeast	14.9%	8.1%	2.8%	1.7%	1.2%	4.2%
Southwest	13.1%	9.1%	2.2%	1.4%	2.0%	4.1%
Statewide	6.0%	4.4%	1.8%	1.4%	1.2%	2.4%

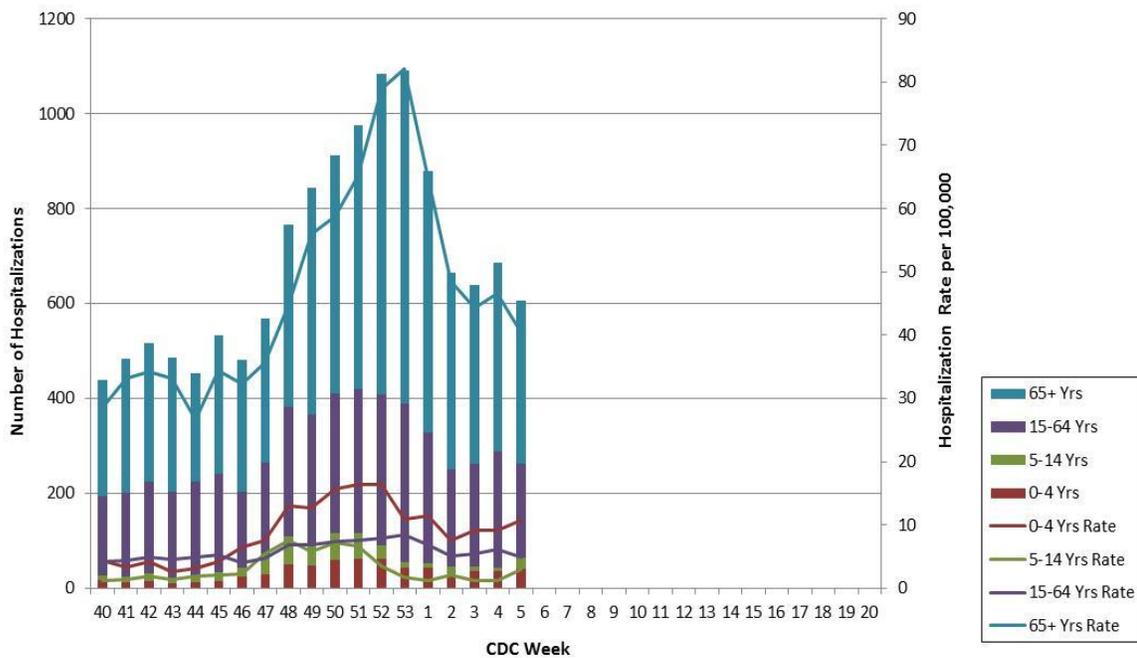
[†]Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).

Graph 5. Percentage of Emergency Room Visits with the Chief Complaint of Influenza-like Illness (ILI) for each District by CDC Week, ESSENCE Participating Hospitals in Missouri, 2014-2015*



† Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).
 *2014-2015 Season-to-Date through the week ending February 7, 2015 (Week 5)

Graph 6. Number and Rate of Patients by Age Group Hospitalized with Influenza and/or Pneumonia Syndromes at Participating Missouri Hospitals, by CDC Week, 2014-2015*



† Data Source: Hospitalization data from Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE HL7 messaging portal. Includes data from 96 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>). Population data from DHSS Population MICA 2012 (<http://health.mo.gov/data/mica/mica/population.php>).
 *2014-2015 Season-to-Date through the week ending February 7, 2015 (Week 5)

Additional Influenza Data Sources:

St Louis Children's Hospital Laboratory: <http://slchlabbtestguide.bjc.org/Default.aspx?url=7fc7ae5e-0d4b-4ffa-baab-7fa34d1545c3>

Centers for Disease Control and Prevention: National Influenza Surveillance (FLUVIEW)
<http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/